Jeena Yin

Computer Science & Music Technology

Carnegie Mellon University | Bachelor of Computer Science and Arts | GPA: 3.89 | May 2020
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Summary

I am a **Computer Scientist**, **Musician**, and Designer, exploring Game Design and Interactive Art.
I presented a **machine learning** project at International Computer Music **Conference**.
I performed live electronic **music** at an overnight concert. I presented an **interactive art** project at a limestone mine.
I made a **game** about a fat sheep who wants to become a basketball, and did voice acting for the sheep.

Skills

Programming Languages
C, C#, Python, Javascript, SML, HTML/CSS, Swift

Tools & Frameworks
Node.js, AWS, p5.js, Processing, Jupyter Notebook

Software
Unity, Ableton, Max/MSP, ProTools, FMOD

Hardware
HTC Vive, Kinect, Leap Motion, Raspberry Pi, Arduino

Computer Science Courses

15-210 Parallel & Sequential Algorithms
15-213 Computer Systems
15-122 Data Structures
15-150 Functional Programming
15-213 Computer Systems
15-259 Probability and Computing

Relevant Courses

11-411 Natural Language Processing
53-571 Game Design, Prototyping and Production
10-615 Machine Learning and Art
05-499 Human-Computer Interaction: Accessibility
60-423 Interactive Art

Grants & Honors

1st Place Alexa Day at CMU School of Computer Science - *April 2019*
Dean's List of School of Computer Science - *Dec. 2016, May 2017, Dec. 2017, May 2018*
Dean's List of BXA Intercollege Programs - *Dec. 2018*
Frank-Ratchye Fund for Art @ the Frontier Grant, Carnegie Mellon University - *May 2018*
School of Computer Science Travel Scholarship - *Jun. 2018*
College of Fine Arts Dean's Grant - *Jun. 2018*
School of Music Travel Fund- *May 2018*

Projects & Presentation

"Let's Practice", an Alexa Music Practice Skill - First Place Presentation - *Nov. 2018-Present*
(Team) I am the programmer of an Alexa skill project using Amazon Alexa. As a team of 2, we are developing a Music Practice skill, that contains music theory and ear training game, user progress tracking database, music metronome and drone functions. The project is done with Node.js. The presentation at the School of Computer Science in April 2019 was placed the 1st place out of 19 teams.

"Duo-Synth" Project Presentation, International Computer Music Conference - *Aug. 2018*
(Solo) A machine learning research that explores real-time AI algorithmic music generation based on multi-user motion capture. Project is presented in August 2018 at the International Computer Music Conference. It is developed with a single layer convolutional network implemented in Python, and uses Max/MSP and JavaScript.

"Bob, the Globetrotter" Project Presentation, Meeting of the Minds - *May 2019*
(Team) A 2D platform game with custom laser-cut controllers.

"cellulaire en colère" (Angry Cellphones), Art and Machine Learning Final Project - *May 2018*
(Team) Human voice generation using SampleRNN and WaveRNN. Presented in the form of arguing cell-phones with characteristics of angry individuals.

"Laa Laa vs. the Computerized World", Art and Machine Learning Project - *Mar. 2018*
(Team) Script generation with LSTM. Presented as a video-taped performance of the generated script.

"Debussy in a Nutshell", Art and Machine Learning Project - *Apr. 2018*
(Solo) Raw audio wave generation with WaveNet. Created ambient soundscape from 45 minutes of Debussy's music recordings.

Work Experience

VR Researcher for "VR-Home," Entertainment Technology Center - *Jun.-Aug. 2018*
I built 4 multi-user VR spaces with a team of 5, aiming to make VR experiences comfortable and authentic. Project was developed with Unity, C#, and HTC Vive. Project was later renamed as "Abode".

Full-Stack Web App Developer, The Zoom City Project - *Sep.-Dec. 2017*
Built 2 interactive children's ebooks to teach children English. Implemented speech recognition with Web Speech API. Speech recognition/natural language processing. UI Design. JavaScript. Framer

15-322 Teaching Assistant - *Aug.-Dec. 2018*
Introduction to Computer Music

18-090 Teaching Assistant - *Aug.-Dec. 2018*
Multimedia Signal Processing

Service & Extra Curricular Activities

Volunteer (Teacher/Archivist), Assemble - *Jun.-Aug. 2018*
Lead workshops that taught arts and technology to children of age 4-12 at Assemble, a Pittsburgh non-profit community space dedicated to fostering learning and creativity. Archived data of past attendees.

Member of "One Night in Beijing" Annual Cultural Show, Carnegie Mellon University - *Jan. 2017-Present*
Actor, Dancer

Co-Stage Manager: Scotch'n'Soda Theatre, Carnegie Mellon University - *Jan.-Apr. 2017*
Co-stage-managed the largest annual carnival theatre: "Heathers".

Certified CRLA Level 1 Peer Tutor, Carnegie Mellon University - *Feb. 2017-May. 2018*
Tutored 3 Computer Science courses:
15-122: Principles of Imperative Computation,
15-150: Principles of Functional Programming,
15-251: Great Ideas in Theoretical Computer Science

Large-Scale Musical Performances

Subsurface, Carnegie Mellon University Exploded Ensemble - *Dec. 2017*
Subsurface is a music festival in a limestone mine. I debut my Duo-Synth project at Subsurface. I was a singer at the concert.

Subsurface 2.0, Carnegie Mellon University Exploded Ensemble - *Dec. 2018*
Subsurface 2.0 is the second version of the subsurface music festival that happened in a limestone mine. I was a lighting designer and keyboard player.

Snoozefest, Carnegie Mellon University Exploded Ensemble - *Apr. 2018*
Snoozefest is an overnight ambient electronic music concert. I performed two 30-minute-long electronic music sets.

References

Anil Ada – *aada@andrew.cmu.edu*
Professor of Computer Science at Carnegie Mellon University

Jesse Stiles – *jessestiles@gmail.com*
Professor of Media Art at Carnegie Mellon University

Golan Levin – *golan@andrew.cmu.edu*
Professor of Art at Carnegie Mellon University